

REMARKS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided, for the indication that the drawings are acceptable, for returning an initialed copy of the page of the Information Disclosure Statement which lists cited applications, and for the acknowledgment of Applicants' Claim for Priority and receipt of the certified copy of the priority document in the Official Action.

Applicants acknowledge with appreciation the indication that claims 2-18 and 21 contain allowable subject matter on page 3 of the Official Action.

Claims 1-21 are currently pending. Applicants respectfully request reconsideration of the outstanding rejections, and allowance of all the claims pending in the present application.

On page 2 of the Official Action, claims 1, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over AMR (U.S. Patent No. 5,595,068) in view of LARSSON (U.S. Patent No. 6,131,653), and over AMR (U.S. Patent No. 5,595,068) in view of LARSSON (U.S. Patent No. 6,131,653) and HERNANDEZ et al. (U.S. Patent No. 6,182,460).

Applicants respectfully traverse these rejections under 35 U.S.C. § 103(a).

Claim 1, recites, inter alia, “a fan in the space for drawing air and discharging through the indoor heat exchanger, and a ventilation guide duct on an underside of the indoor heat exchanger having a partition wall for separating external air supplied from an outside of the room, and room air, for guiding the external air to the room through the fan, and the room air to the outside of the room; an air supply duct and an air discharge duct each having one end connected to the ventilation guide duct for guiding the external air to the room, and the room air to the outside of the room, respectively; and a preheat exchanger provided in the middle of the air supply duct and the air discharge duct, for indirect heat exchange of the external air and the room air passing through the air supply duct and the air discharge duct.”

Applicants submit that AMR lacks any disclosure of a fan which discharges air through an indoor heat exchanger, as recited in claim 1. In this regard, Applicants note that the fan 11 in AMR draws room air through the heat exchanger 12, but does not discharge air through the heat exchanger 12 (Note Fig. 1 and column 2, lines 42-55). Further, Applicants note that the Examiner has provided no explanation regarding this deficiency in the teachings of AMR.

Applicants further submit that AMR lacks any disclosure of a partition wall which separates external air and room air, for guiding the external air to the room through the fan, and for guiding the room air to the outside of the room, as recited in claim 1.

Applicants note that AMR lacks any disclosure of a ventilation guide duct having a partition wall below the indoor heat exchanger 12 for separating external air and room air.

Applicants further note that AMR lacks any disclosure of room air being guided to the outside of the room. In this regard, Applicants submit that AMR does not disclose a system in which room air is ventilated to the outside, and outside air is delivered to the room. Instead, as shown in Fig. 1 of AMR, room air is guided to fan 11 directly through inlet 31, and indirectly through false ceiling 41, space 36 and inlets 33, 34, 35. After passing through the indoor heat exchanger 12, the air is fed by fan 11 back into the room through outlet 32 (note column 2, lines 37-57). Accordingly, it is clear that room air is not ventilated to the outside in the system of AMR.

Applicants further note that the Examiner has taken Official Notice that it is well known in the art to provide a damper to control supply and discharge rates. Applicants note that none of the rejected claims recite such a damper, and thus it is not clear to Applicants why the Examiner has taken such Official Notice. However, if the taking of such Official Notice is an attempt by the Examiner to satisfy the partition wall feature recited in claim 1, Applicants submit that provision of such a partition wall is not well known in the art, nor would the provision of such a partition wall in the system of AMR have been obvious to one of ordinary skill in the art. Accordingly, Applicants request that the Examiner provide some evidentiary basis for such Official Notice.

Further, insofar as the Examiner appears to rely upon the teachings of HERNANDEZ et al. for provision of a partition wall in the system of AMR, Applicants submit that the Examiner has provided no statement as to why one of ordinary skill in the art would have been motivated to make such a modification. Applicants submit that the modification suggested by the Examiner is instead clearly based upon the use of impermissible hindsight reasoning, rather than the teachings of the references themselves.

Applicants further submit that the provision of a partition wall in the system of AMR would not have been obvious to one of ordinary skill in the art since there is no apparent need to separate the room air flowing in through inlet 31 from the room air flowing in through inlets 33, 34, 35. In this regard, Applicants note that both air streams pass through the indoor heat exchanger 12 and back into the room through outlet 32, thus there would appear to be no apparent need for a partition wall to separate the air flows (i.e., particularly since the room air is not guided to the outside in the system of AMR). Further, even assuming, arguendo, that a partition wall were to be provided in the system of AMR as suggested by the Examiner, Applicants submit that such a modified system would still lack any teaching of room air being guided to the outside of the room.

Applicants further submit that AMR lacks any disclosure of an air supply duct for guiding external air to the room, or an air discharge duct for guiding room air to the outside of the room, as recited in claim 1. In this regard, Applicants note that in the

system of AMR room air is guided to fan 11 directly through inlet 31, and indirectly through false ceiling 41, space 36 and inlets 33, 34, 35. After passing through the indoor heat exchanger 12, the air is fed by fan 11 back into the room through outlet 32 (note column 2, lines 37-57). Accordingly, it is clear that the room air is not ventilated to the outside in the system of AMR, and thus there is clearly no air discharge duct as recited in claim 1. Further, it is clear that external air is not fed to the room in the system of AMR, and thus there is clearly no air supply duct as recited in claim 1. Further, Applicants note that the Examiner has provided no explanation regarding these deficiency in the teachings of AMR.

Applicants further submit that since AMR lacks the air supply duct and air discharge duct recited in claim 1, as explained above, it is also clear that AMR lacks any disclosure of the air supply fan recited in claim 19 or the air discharge fan recited in claim 20.

Applicants further submit that AMR lacks any disclosure of a preheat exchanger provided in an air supply duct and an air discharge duct, for indirect heat exchange of external air and room air passing through such air supply duct and air discharge duct, as recited in claim 1. Applicants note that the Examiner appears to acknowledge that AMR lacks any disclosure of a preheat exchanger. However, as noted above, AMR also lacks any disclosure of an air supply duct with external air passing therethrough, or an air

discharge duct with room air passing therethrough. Accordingly, Applicants submit that it would not have been obvious to one of ordinary skill in the art to provide such a preheat exchanger in the system of AMR, particularly in view of the lack of any such air supply duct or air discharge duct in the system of AMR.

Further, insofar as the Examiner appears to rely upon the teachings of LARSSON for provision of a preheat exchanger in the system of AMR, Applicants submit that the modification suggested by the Examiner is clearly based upon the use of impermissible hindsight reasoning, rather than the teachings of the references themselves. In this regard, Applicants note that the heat exchanger 80 in LARSSON is not disclosed as provided in an air supply duct (which delivers outside air) and an air discharge duct (which ventilates room air), but is instead provided in an air supply stream 50 and a scavenge stream 52, which are both fed by a fan 40 from an outside input stream 32 (note Fig. 1 and column 3, lines 10-30). Accordingly, Applicants submit that the teachings of LARSSON would not have motivated one of ordinary skill in the art to provide a preheat exchanger in the system of AMR (which itself does not include ventilation of room air or delivery of outside air), much less to provide such a preheat exchanger in such non-existent air supply and air discharge ducts.

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Applicants respectfully submit that the rejections of claims 1, 19 and 20 under 35 U.S.C. § 103(a) are improper at least for each and certainly for all of the above-noted reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections, and an early indication of the allowance of all of the pending claims.

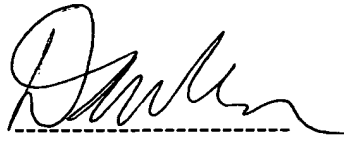
SUMMARY AND CONCLUSION

Consideration of the present remarks, reconsideration of the outstanding Official Action, and allowance of the present application and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Should there be any questions or comments, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
Gi Seop LEE et al.

A handwritten signature in black ink, appearing to read 'Daniel B. Moon', written over a horizontal dashed line.

Bruce H. Bernstein
Reg. No. 29,027

Daniel B. Moon
Reg. No. 48,214

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GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191